

## Features

- Cost-effective R-C construction
- Insulation resistance testing for reliability
- Molded surface mount or DIP packaging
- Compatible with automatic assembly equipment
- Custom value capability

- RoHS compliant version available ("L" part number suffix)

For information on EMI/RFI Filters, download Bourns' EMI/RFI Filters Application Note.

## 601 Series - RC Network T-Filters

### General Description

Continual advances in digital IC technology are creating stringent demands on EMI/RFI levels in equipment.

EMI/RFI low pass filters are required in personal computers, data terminals, test equipment and process controllers for high frequency suppression into or out of electronic equipment.

### Electrical Specifications - Resistors

Standard Resistance Range*	10 ohms - 100 ohms
Series Resistance Tolerance	±10 %
Temperature Coefficient of Resistance	±300 ppm/°C
Operating Voltage	25 volts maximum
Operating Temperatures	+10 °C to +85 °C

\*Other Resistance Values Available, 10 ohms - 1 megohm

### Electrical Specifications - Capacitors

Standard Capacitance Range	50 pF to 200 pF
Capacitance Tolerance	±30 %
Temperature Characteristic	Z5U
Operating Temperatures	+10 °C to +85 °C
Voltage Rating	25 volts
Dielectric Withstand Voltage	2.5 x rated voltage
Insulation Resistance	10,000 megohms minimum

### Environmental Specifications - Resistors

	ΔR MAXIMUM
Thermal Shock	±0.5 %
Resistance to Solder Heat	±0.5 %
Terminal Strength	±0.5 %

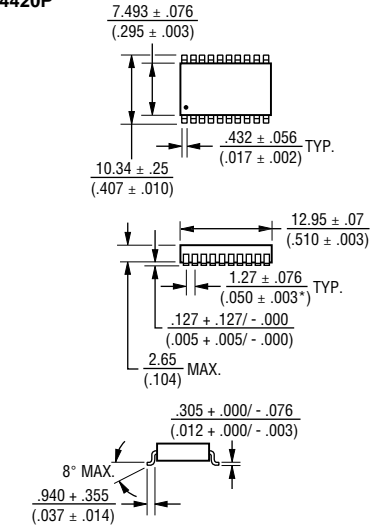
### Mechanical Specifications

Flammability	Conforms to UL94 V-0
Leadframe	Copper, solder coated
Body Material	Epoxy/Novolac
Lead Solderability	Meet requirements of MIL-STD-202 Method 208

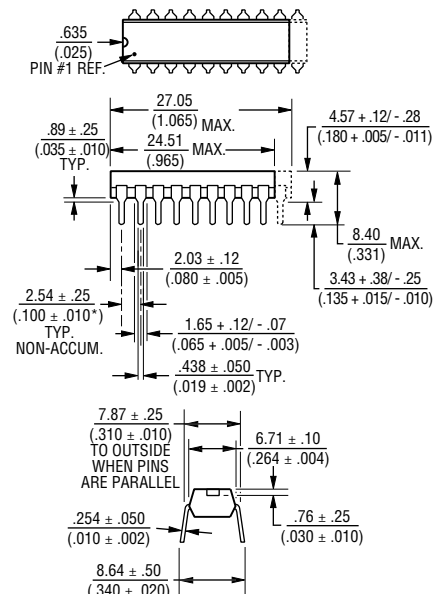
For Standard Values Used in Capacitors, Inductors, and Resistors, [click here](#).

### Product Dimensions

#### 4420P



#### 4118R AND 4120R



Governing dimensions are metric. Dimensions in parentheses are inches and are approximate.

\*Terminal centerline to centerline measurements made at point of emergence of the lead from the body.



**WARNING**  
Cancer and Reproductive Harm  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*RoHS Directive 2015/863, Mar 31, 2015 and Annex. Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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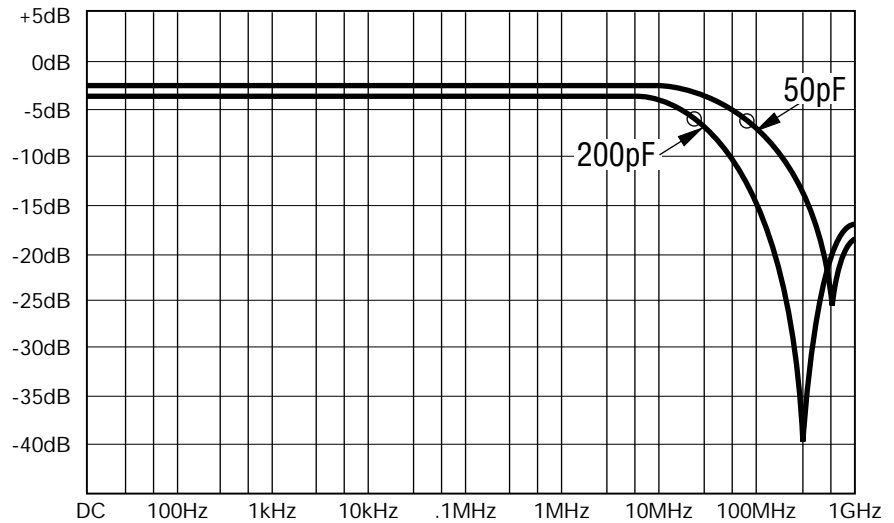
# 601 Series - RC Network T-Filters

**BOURNS®**

## Attenuation Vs. Frequency - Typical Capacitor Values With R= 25 Ohms

Attenuation vs. Frequency  
 Model 4120R-601-250/500  
 Model 4420-601-250/500  
 50pF - 3dB @ 84 MHz

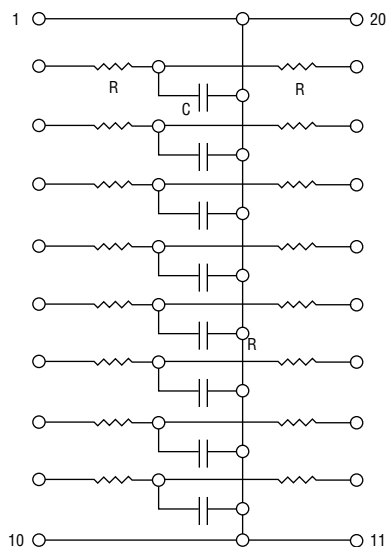
Attenuation vs. Frequency  
 Model 4120R-601-250/201  
 Model 4420P-601-250/201  
 200pF - 3dB @ 21 MHz



○ indicates - 3dB rolloff frequency ( $f_c$ )

## Typical Circuit

4120R-601-RC/CC  
 4420R-601-RC/CC



These low-pass filters are ideal for installation between I/O drivers and RS 232 connectors.

## How To Order EMI/RFI Filter Networks

**44 20 P - 601 - RC/CC**

Model (44 = SMD SOIC Pkg) (41 = Molded DIP)

Number of Pins

Physical Configuration (P = Surface Mount Device (SMD) R = Molded DIP)

Terminations (L = RoHS compliant (tin-plated) Blank = Tin-lead plated)

Resistance/Capacitance Code (First 2 digits are significant Third digit represents the number of zeros to follow)

Electrical Configuration (For tube packaging, use code "T06")

Insert RC/CC Code from table below to form part number.

RC	R	CC	C
250	25	500	50 pF
270	27	101	100 pF
470	47	181	180 pF
820	82	201	200 pF
101	100		

Consult factory for values not listed.

## Packages Available

4420P-601-\*RC/CC-SMD  
 4120R-601-\*RC/CC-DIP  
 4118R-601-\*RC/CC-DIP

\*First two digits are significant. Third digit represents the number of zeros to follow.

Seven circuits in an 18-pin package.  
 Eight circuits in a 20-pin package.

REV. 09/19

Specifications are subject to change without notice.

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